

CITY AND COUNTY OF THE CITY OF CHESTER.



ANNUAL REPORT

TO

THE MAYOR, ALDERMEN, AND COUNCILLORS OF THE
CITY AND COUNTY OF THE CITY OF CHESTER

ON THE

HEALTH OF THE CITY

IN

1923

BY

D. RENNET, M.B.E., M.D., D.P.H.,

MEDICAL OFFICER OF HEALTH.

CHESTER:

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1924.

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City and County of the City of Chester.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH.

I. GENERAL STATISTICS.

Area (acres)	2862
Population (1923)	41610
Number of inhabited houses	8506
Number of families or separate occupiers (1923) ..	8954
Rateable value	£240,397
Sum represented by a penny rate	£930

The Registrar General estimates the population as at the 30th of June, 1923, at 41,420, to which has to be added 295 Chester residents in outside institutions, and 105 deducted for non-Cestrians resident in Chester institutions, giving a corrected population of 41,610.

This is again rather lower than a local estimation gives, and consequently raises our birth and death rates. The rates given in the report are, however, calculated on the Registrar's figures.

2. EXTRACTS FROM VITAL STATISTICS FOR THE YEAR.

Births—Legitimate, 769; Illegitimate, 31. Birth Rate, 19'22

Deaths, 546. Death Rate (crude), 13'12.

Number of Women dying in, or in consequence of, Childbirth—From Sepsis, 1; from Other Causes, 1.

Deaths of Infants under One Year of age per 1000 births—Legitimate, 85'8; Illegitimate, 96'7. Total, 86'2

Deaths from Measles (all ages), 0'024.

Deaths from Whooping Cough (all ages), 0'192.

Deaths from Diarrhoea (all ages), 0'216.

Compared with 1922, our birth rate is lower by 1·64, and lower than in 1921 by 2·4. The death rate is lower than in 1922 by 0·67, and by 1·0 compared with 1921.

The infant death rate is higher by 7·6 than in 1922, but 2 lower than in 1921. This apparently large increase means only one more death and 16 fewer births. The comparatively small numbers dealt with lead to large fluctuations in the rate.

The following comparison can be made with the country as a whole, and with smaller towns comparable with Chester:—

	Birth rate per 1000 population.	Death rate all causes.	Infant deaths per 1000 births.
England and Wales	19·7	11·6	69
Smaller towns	19·8	10·6	69
Chester	19·2	13·1	86

Our birth rate is about equal to the average, while our death rate and infant death rate are higher. We occupy about the same relative position as usual.

CAUSES OF DEATHS. — The more noticeable increases in — causes of deaths are the following:—Whoopingcough, 7; tuberculous diseases, 5; rheumatism, 3; organic heart disease, 16; and diarrhœal diseases, 5; while there have been reductions in the following:—Measles, 6; influenza, 17; bronchitis, 16; pneumonia, 23; Bright's disease, 7; and debility of infants, 7.

While the deaths from pneumonia and bronchitis are greatly reduced, deaths from diseases of the respiratory system, excluding tubercle of the lungs, cause 16·6 per cent. of the total deaths. Ten per cent. of the deaths are caused by some form of tubercle.

Considering deaths according to age, there was one more death during the first year of life, but there were 16 fewer births. During the second year there were three fewer deaths, while in the first five years the numbers remain the same, although there was a slight increase in the third year due to deaths from infectious disease. In the period 35 to 45, there is a reduction of 12, and in the period 45 to 65, a reduction of 13.

INFANT DEATHS. Those were 86·2 per 1,000 births.

Developmental disease is by far the greatest cause of death in the first year of life, being responsible for 37·6 per cent. of the deaths

in the first year. Disease of the respiratory system caused 18·8 per cent., being considerably better than in 1922. Deaths from diarrhoeal diseases were 10 per cent., being 1·6 worse than last year. Infectious diseases caused the same number of deaths as last year, being 5·8 per cent. of the infant deaths, representing four deaths from whoopingcough. Nearly nineteen per cent. of the infant deaths (18·8) took place in the first week of life, and 36·2 in the first month. In the previous year the corresponding figures were 27·6 per cent. and 38·2 per cent.

The following table sets out the mortality rates for the infectious diseases and principal causes of death; and gives the comparison with the average for the last five years:—

Disease.	Average 1918-1922.		Rate for 1923.
Enteric fever	0·02	...	0·00
Small-pox	0·00	...	0·02
Measles	0·10	...	0·02
Scarlet fever	0·00	...	0·00
Whoopingcough	0·13	...	0·19
Diphtheria	0·04	...	0·04
All common infectious diseases	0·29	...	0·27
Diarrhoeal diseases (under 2 yrs.)	0·24	...	0·22
Influenza	0·36	...	0·12
Bronchitis	1·21	...	1·29
Pneumonia	1·46	...	0·768
Pulmonary tuberculosis	1·07	...	1·00
All tuberculous diseases	1·37	...	1·32

Deaths from whoopingcough and bronchitis are both above the average. The other commoner causes of death are either under the average or equal to it.

Considering the death rates in different wards, we get some interesting information. On the assumption that the proportion of population in the different wards has remained the same as at the census of 1921, we get the following populations and death rates in the different wards:—

	Population.		Death rate.
Chester	41610	...	13·12
Boughton	12628	...	12·4
St. Oswald's	7964	...	12·7
Trinity	9795	...	12·9
S. Mary's	6940	...	13·4
St. John's	4277	...	13·5

Taking the proportion of rooms per person, as given in the census returns, we get the following order:—

Ward.	Rooms per person.	Death rate
Trinity	1·19 ...	12·9
St. Mary's	1·18 ...	13·4
St. John's	1·16 ...	13·5
Boughton	0·99 ...	12·4
St. Oswald's	0·98 ...	12·7

which suggests that the denser the population in the house the healthier it is.

Something of an explanation is given on considering the number of court houses in each of the wards:—

Ward.	Number of Court houses.	Death rate.
St. Mary's	156 ...	13·4
St. John's	150 ...	13·5
Trinity	139 ...	12·9
Boughton	132 ...	12·4
St. Oswald's	87 ...	12·7

It will be seen that the order of court density is much nearer the order of death rate incidence, and gives at least part of the explanation of the death rates in wards. A further explanation is given on considering the character of the courts. Thus, in St. John's ward, we have the Handbridge courts and some others about as bad off Newgate Street and Pepper Street; in St. Mary's ward we have the courts off Castle Street and Cuppin Street. In Boughton there is a fairly dense population, but nothing very bad in the nature of courts.

3. NOTIFIABLE DISEASES DURING THE YEAR.

The following table sets out the notifiable diseases occurring during the year, together with the deaths (printed in *italics*):—

3. NOTIFIABLE DISEASES DURING THE YEAR, 1923 (Deaths in italics).

DISEASE.	Under 1 year.	1 and under 2	2 and under 3	3 and under 4	4 and under 5	5 and under 10	10 and under 15	15 and under 20	20 and under 35	35 and under 45	45 and under 65	65 and over	Total Cases	Cases admitted to Hospital.
Small Pox ...	0	0	0	0	0	0	0	1 (1)	0	0	0	0	1 (1)	0
Diphtheria ...	1	1	0	1 (1)	4	8 (1)	10	2	8	0	0	0	35 (2)	33
Scarlet Fever ...	1	2	2	4	3	26	20	8	7	0	1	0	74	72
Enteric Fever ...	0	0	0	0	0	1	0	0	1	0	0	0	2	2
Pneumonia ...	14 (8)	12 (5)	7 (1)	5 (1)	4	12	9 (1)	5	16 (1)	17 (4)	19 (5)	6 (6)	126 (32)	57
Erysipelas ...	0	0	0	0	0	0	0	0	0	4 (1)	4	2	10 (1)	0
Puerperal Fever ...	0	0	0	0	0	0	0	0	1 (1)	0	0	0	1 (1)	0
Chicken Pox ...	0	2	0	2	0	7	0	0	2	2	0	0	15	0
Ophthalmia Neonatorum ...	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Pulmonary Tuberculosis M.	1 (1)	0	1	0	0	0	0	1 (1)	11 (13)	5 (3)	6 (7)	0	25 (25)	22
do. do. F.	0	1 (1)	0	0	0	3 (1)	1 (1)	3 (2)	8 (4)	2 (3)	6 (4)	2 (1)	26 (17)	14
Other Forms Tuberculosis M.	0	2 (2)	0	0	2	4	1	0 (1)	2 (1)	0	0	0 (1)	11 (5)	2
do. do. F.	1 (1)	2 (2)	2 (2)	0	0	3 (1)	2	0	2 (2)	0	0	0	12 (8)	3

Ophthalmia Neonatorium.	CASES.			Vision Unimpaired.	Vision Impaired.	Total Blindness.	DEATHS.
	Notified.	Treated.					
		At Home.	By Hospital.				
1	1	1	1	—	—	—	—

The year has been characterised by a low incidence of notifiable infectious diseases, an experience common to the greater part of the country.

Of the non-notifiable infectious diseases, there was very little measles until towards the end of the year, when there were signs of considerable prevalence. It is on the whole mild and many of the cases are german measles, which is invariably a mild type. Whoopingcough was prevalent at the beginning of the year, and was in many cases severe. Six cases of severe type or complicated were admitted to hospital, and all recovered. Vaccine treatment was adopted for three of them, and was advantageous when used early. Ether injections were used for the others, and seemed to have no effect except in one where used on the first appearance of the cough it seemed to abort the attack.

Diphtheria.—This was less prevalent than it has been for some years. Thirty-five cases were notified, being a marked reduction on the previous year, when 93 cases occurred, and 120 in the year 1921. The virulence was not so great as in 1921 and the beginning of 1922, and there were only two deaths. It is now possible to provide immunity against diphtheria, but no action in this direction has yet been taken. In the event of epidemic prevalence, the production of immunity in a threatened group of children would be of very great value, and it can be done with no risk and little inconvenience. In the absence of danger there seems to be no real need to adopt the procedure. Of the 35 cases occurring, 27 were among children and 18 of those were between the ages of 5 and 15. The disease was scattered among a number of schools and all over the City, no school or district shewing marked prevalence.

Scarlet Fever.—There were 74 cases of scarlet fever notified compared with 134 in the previous year and 116 in 1921. The disease continues to be of very mild type, and causes the greatest difficulty in diagnosis. Since german measles has become prevalent in the last few months mistakes have become more likely, and are very difficult if not impossible to avoid. There must be quite a number of the mild cases escaping notice altogether, and if so there must be a degree of immunity to scarlet fever being produced, which will do much to prevent epidemic prevalence for some years.

Enteric Fever.—There were two cases of enteric fever notified during the year. One a nurse who had been nursing enteric cases imported from outside, and who made a good recovery, the other a child whose source of infection could not be traced definitely. He had been in Liverpool about the time he was infected, but there was no known enteric there.

Small-pox.—One case of small-pox was notified during the year. The patient was a young man of seventeen years who had been in indifferent health for a considerable time. He was unemployed, and devoted a certain amount of time to playing at concerts and meeting various people in this connection, as well as in looking for work. Little or no information as to his previous movements was at first available, but ultimately it was possible to trace a large number of more or less direct contacts, who were offered and accepted revaccination. In addition, many people were revaccinated by their own medical men. Every precaution was taken to prevent the spread of the disease, and there has been no further case. The precaution had previously been taken to have chicken-pox made a notifiable disease, and since then every case has been seen.

Pneumonia.—The notification of pneumonia is now being well carried out. One hundred and twenty-six cases were notified, compared with 115 in the previous year. This continues to be one of the chief causes of death, accounting for 5·8 per cent. of the total deaths. It is most fatal in the first two years of life, when it accounts for 15 per cent. of the deaths.

Erysipelas was notified on ten occasions, and caused one death.

Puerperal Fever.—There was only one case of puerperal fever notified, and two in the previous year. The case was unfortunately

fatal. There was only one death from other accidents or diseases of pregnancy.

Chicken-pox.—Owing to the prevalence of small-pox, it was thought desirable to have chicken-pox made a notifiable disease, and this was done in August. Since then fifteen cases have been notified, and all have been seen and examined. In many cases, however, the parents do not call a medical man, and do not notify, so that many cases are entirely missed. There is thus a distinct danger that an unrecognised case of small-pox escapes the notice of the department, and leads to the spread of that disease.

Ophthalmia Neonatorum was notified only once. The case recovered without injury to the child's eyesight.

Tuberculous Disease.—The notifications of tuberculous disease of all forms numbered 74, compared with 58 in the previous year, and 82 in 1921. Of those, fifty-one were of pulmonary tuberculosis (twenty-five males and twenty-six females), compared with 34 in the previous year, and 54 in 1921. The deaths from this form of the disease numbered 42, compared with 39 and 49 in the two preceding years. Other forms of tuberculous disease provided 23 notifications (11 males and 13 females), compared with 24 and 28 in the two preceding years. Deaths from all tuberculous disease numbered 55, compared with 50 last year and 61 in 1921. Of those, 42 were from pulmonary disease, compared with 39 and 49 in the two previous years. Other forms of the disease caused 13 deaths, compared with 11 in the previous year and 12 in 1921. The notification of tuberculous diseases is carried out in a quite satisfactory manner.

The following table gives particulars of the notifications received during the year:—

Public Health (Tuberculosis) Regulations, 1912.

Summary of Notifications during 1923.

Number of Notifications on Form A.

Age Periods.	Primary Notifications.										Total Notifications (i.e. includ- ing cases previously notified by other Doctors).	
												Totals.
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65		
Pulmonary Males ...	1	1	0	0	1	5	6	5	6	0	25	27
Pulmonary Females ...	0	1	1	1	3	2	6	2	5	1	24	27
Non-Pulmonary Males ...	0	3	1	1	0	0	2	0	0	0	7	8
Non-Pulmonary Females ...	1	4	2	1	0	1	1	0	0	0	10	10
Totals ...	2	9	4	3	4	8	15	7	11	1	66	72
												13

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No. of Notifications on Form C.

Number of Notifications on Form B.

Age Periods.	Primary Notifications.				Total Notifications (<i>i.e.</i> including previously notified by other Doctors).	Poor Law Institu- tions.	Sana- toria.	Pavilion. Sealand	Shropshire Orthopaedic Hospital.
				Totals.					
	Under 5	5 to 10	10 to 15						
Pulmonary Males ...	0	0	0	0	0	2	7	13	0
Pulmonary Females ...	0	2	0	2	2	4	4	6	0
Non-Pulmonary Males ...	1	3	0	4	5	0	0	1	1
Non-Pulmonary Females ...	0	1	1	2	2	0	0	0	3
Totals ...	1	6	1	8	9	6	11	20	4

Supplemental Return.

New cases of Tuberculosis coming to the knowledge of the Medical Officer of Health or Chief (Administrative) Tuberculosis Officer during the period from the 31st December, 1922, to the 29th December, 1923, otherwise than by notification on Form A or Form B under the Public Health (Tuberculosis) Regulations, 1912.

Age Periods.	0 to		1 to		5 to		10 to		15 to		20 to		25 to		35 to		45 to		55 to		65 and upwards.		Total Cases.
	1		5		10		15		20		25		35		45		55		65				
Pulmonary Males	0		0		0		0		0		0		2		0		0		0		0		2
Pulmonary Females	0		0		0		0		0		0		0		1		0		0		0		1
Non-Pulmonary Males	0		2		0		0		1		0		0		0		0		0		1		4
Non-Pulmonary Females	0		0		0		0		0		1		0		0		0		0		0		1

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Includes cases discovered amongst "inwardly transferred" deaths; on death certificates and from the Military Authorities.

4. CAUSES OF SICKNESS.

While there was a considerable amount of whoopingcough present at the beginning of the year, and measles became prevalent at the end, the commoner infectious diseases were not prominent as a cause of sickness, and were mild in character. There was nothing outstanding in the way of severe sickness during the year, although there was a fairly large amount of sickness. The more common form seems to have been various manifestations of catarrhal conditions, and various forms of rheumatism.

5. SUMMARY OF NURSING ARRANGEMENTS.

HOSPITALS AND OTHER INSTITUTIONS AVAILABLE FOR THE DISTRICT.

Professional Nursing in the home:—

(a) General.—The District Nursing Association undertakes home nursing, either at the request of a parent or of a medical man.

(b) By arrangement with the Local Authority, the Association also helps in the home treatment of school children suffering from minor ailments, and in times of epidemic in the treatment of measles and whoopingcough. For this work a grant of £50 a year is given.

The Chester Benevolent Institution attends a large proportion of the midwifery cases in town, and in the case of necessitous mothers pays the doctor's fee where medical help has to be called. It has also the nucleus of a maternity home, two beds in the Institution, which may be used by the Local Authority for necessitous cases. This nucleus it is hoped materially to augment in the near future, and a suitable house is at present being looked for.

The Local Authority does not subsidise or employ any midwife. There are now 22 midwives practising in the City, of whom 6 work in connection with the Benevolent Institution.

The Chester Royal Infirmary continues to be of increasing usefulness. During 1923, the patients receiving inpatient treatment numbered 2,148, and the outpatients 6,626. By arrangement with the Local Education Authority, cases of defective vision, enlarged tonsils and adenoids are treated at an annual cost of £150 to the Education Authority.

St. James's Hospital.—The Board of Guardians have modernised their hospital arrangements and accommodation, and now have an

efficient hospital of 250 beds. The hospital has recently been approved by the General Nursing Council for England and Wales as a training school for nurses, in affiliation with the Birkenhead Union Infirmary.

The following Clinics or treatment centres are provided by the Local Authority with the exception of the Orthopædic After-Care Clinic, which is conducted by a local voluntary committee under the auspices of the Cheshire Federation of Maternity and Child Welfare, the Local Authority providing the rooms.

Maternity and Child Welfare, Crook House, Crook Street.—The work is carried on by a local voluntary committee with the help of the Health Visitors of the Local Authority, the Authority also providing the rooms and medical attendant. The premises are totally insufficient, and it is hoped that we shall be in new premises in the course of a few months.

School Clinic (Inspection, Treatment and Dental), Crook House, Crook Street.—Those clinics are carried on in part of the same building as the Maternity and Child Welfare Clinic, and premises are similarly inadequate. New quarters are being provided and ought to be occupied in the course of a few months.

Tuberculosis Clinic, 15, St. John Street.—The accommodation is a large waiting room, doctor's consulting room, dispensary, and a room used by the Orthopædic After-Care Clinic. The premises are used by the County Authority on two days a week, similarly by the City Authority—two days in the morning and one evening, and once a week by the Orthopædic Clinic.

Venereal Disease Clinic, at the Chester Royal Infirmary.—Besides the out-patient department, there are four beds retained for the joint use of the City of Chester and the Counties of Denbigh and Flint, while the County of Chester also send patients there, although not partners in the scheme.

Orthopædic After-Care Clinic.—The City of Chester provides the accommodation in the same building as the tuberculosis clinic, and the work is carried on by a local committee under the auspices of the Cheshire Federation of Maternity and Child Welfare. The actual workers are nurses of the Red Cross Society and of the

Order of St. John of Jerusalem. A trained Orthopædic Sister from Shropshire Orthopædic Hospital visits each session, and an Orthopædic Surgeon from the same Hospital once a month.

Maternity and Child Welfare.—There are two Health Visitors devoting their whole time to visiting children from birth to their entry into school, advising mothers as to the management of their children, visiting and advising expectant and nursing mothers, enquiring into the causes of still-births and infant deaths, helping in the supervision of midwives and in the conduct of the Maternity and Child Welfare Clinic.

The Clinic, carried on by a voluntary committee, meets twice a week for the weighing of babies, general advice and health talks to mothers, and for consultation with the medical attendant. During the winter months a third meeting is held for the cutting out and making of children's garments, and for the making down of old garments. It is hoped that on getting into new premises these activities will be extended.

The work of the clinic has been carried on with considerable difficulty during the year, owing to the illness of the Secretary, and the records are not quite complete. The following work has, however, been recorded:—

Babies attending	280
Visits of babies	1504
Children attending	277
Visits of children	1634
Expectant mothers	34
Visits of expectant mothers	84
Number of weighings	646
Infants seen by Doctor	341
Children 1-5 seen by Doctor	219
Number of visits of expectant mothers to Doctor	65

Of the 800 babies whose births were registered during the year, 778 were regularly visited, the remainder having been notified by their medical attendant as not requiring visiting. In this work and in that of investigating the causes of still-births and infant deaths the nurses made 3,872 visits.

HEALTH VISITOR'S REPORT 1923.

Total number of birth notifications during the year	834
(of this number, 21 were notified late, 19 by doctors, and 2 by midwives).	
Cases attended and delivered by doctors	124
Cases attended and delivered by midwives	710
Number of still-births	41
(Midwives' cases, 24; doctors' cases, 17).	
Primary birth visits	675
Return visits	1386
Visits to children between ages 1-5	1480
Visits to expectant mothers	135
Other visits (infectious diseases, etc.)	136
Visits to midwives	60
Total visits	3872

Under the Milk (Mothers and Children) Order, 1918, milk was supplied free to 937 cases. Enquiry into the financial position of the families is made before the milk is given, and in cases where the milk grant would make no material difference to the position of the family the case is referred to the Guild of Social Welfare or to the Guardians. The relief given by the Guardians appears frequently to be too small, and in a large number of cases milk has been given by the Local Authority in addition to the relief.

Only one mother has during the year taken advantage of the scheme for the supply of artificial dentures.

The Notification of Births Act continues to be carried out in a fairly satisfactory manner.

There are 22 midwives practising in the City, all being certified. Of those, 6 work in connection with the Chester Benevolent Institution, which in cases where its nurses have to call in medical help, also pays the medical fee. The supervision of midwives has been carried on as in former years. Their bags, persons, and registers are seen at the beginning of the year, and as occasion arises during the year they are written to or personally interviewed in connection with their work. In addition, the senior health visitor visits their homes, and sees that they are satisfactory.

During the year, three midwives were reprimanded:—

(1) Failing to notify a case of puerperal septicæmia. Temporarily suspended and then warned by the Local Supervising Authority.

(2) Failing to produce register of cases when requested to do so. (This midwife has since cancelled all her engagements, and has not since practised).

(3) Failing to wear dress of washable material as required by Rule 2 of Central Midwives' Board, and for having a soiled lining in her midwifery bag.

Of the 710 cases attended by midwives, they called for medical help in 99, the reasons being as under:—

Feebleness of child	18
Prolonged labour or unusual presentation	14
Complication before labour	5
Complications during labour	9
Complications after labour	12
Rise of temperature	14
Discharge from eyes	4
Deformity of infant	4
Lacerated periræum	16
At request of patient	3
	99

Midwives attended 24 still-births during the year, all of which were investigated and the probable cause found to be as follows:—

Disease or illhealth of mother	5
Accident of parturition	4
Accident to mother	1
Overwork	1
Prematurity	1
Twin pregnancy	1
Difficult labour	5
No satisfactory reason found	6
	24

The whole or part of the doctor's fee was paid by the Local Authority in cases where a midwife had to call for medical help, in

10 cases. Each case is judged on its merits, and the Authority's contribution assessed by the Maternity and Child Welfare Committee.

Notification of artificial feeding is a comparatively rare occurrence, only four being received during the year. Most mothers begin by breast-feeding their infants, but a good many stop in the first few weeks or months. The reasons given in the four notifications were (1) doctor's orders, (2) no breast milk, (3) breast abscess, (4) mother refuses

Ophthalmia Neonatorum.—Only one case was notified. Both eyes were affected. The case was nursed at St. James' Hospital, and made a good recovery without injury to the sight.

The Health Visitors reported 30 sanitary defects, which were attended to. They also reported many cases of very bad overcrowding, but for want of other accommodation nothing could be done for relief.

The School Clinics.—There is an inspection clinic held in the morning, at which advice is given and much of the following-up is done. In the afternoon a treatment clinic is held, at which minor ailments, such as the common skin affections, discharging ears, and injuries are attended to. A dental clinic meets each morning.

The Tuberculosis Clinic is held on Monday and Thursday, from 11 to 12, and on Thursday from 6 to 8 in the evening. Through the clinic and by visits to the homes by the tuberculosis nurse and by the tuberculosis officer close touch is maintained with practically all notified cases. During the year the following work has been done at the Clinic:—

Number of patients attending the Clinic	204
Number of attendances at the Clinic	523
Number of new cases attending the Clinic	61
Number of contacts examined	31
Number of visits to homes by nurse	830

During the year, indoor institutional treatment has been given to 41 patients, including 5 non-pulmonary cases. Four of those non-pulmonary cases have been sent to the Shropshire Orthopædic Hospital.

The Guild of Social Welfare act as an After-Care Committee in (so far as) giving temporary help as required, or in trying to find

suitable employment. The Local Pensions Committee also give help in cases coming under their jurisdiction.

The Venereal Disease Clinic is held at the Royal Infirmary on the following days and hours: Mondays and Wednesdays, 5 to 7 p.m., Thursdays, 1 to 3 p.m.; and Saturdays, 12 to 2 p.m.

The Clinic is also open all day for the purpose of irrigation, and trained assistants are in attendance. The districts served by the Clinic are the City of Chester, and the Counties of Denbigh and Flint. A considerable number of patients attend from the neighbouring portion of the County of Cheshire, although Cheshire has not officially joined the scheme.

During the year, 66 new cases from Chester attended the clinic, compared with 53 in the previous year. These cases were suffering from—

	1923.	1922.
Syphilis	32 ...	23
Soft Chancre	0 ...	0
Gonorrhœa	30 ...	27
Other conditions	4 ...	3
Attendances made by those patients		755
In-patient days		55

During the year, 346 doses of salvarsan substitutes were given. The following table sets out the total work of the clinic during the year:—

	Number of patients who were under treatment or observation on 1st Jan. 1923	Number of patients dealt with for the first time	Total.
Syphilis	143 ...	116 ...	259
Soft Chancre	0 ...	0 ...	0
Gonorrhœa	129 ...	100 ...	229
Syphilis and Gonorrhœa	0 ...	1 ...	1
Conditions other than venereal	0 ...	25 ...	25
Total	272 ...	242 ...	514

Total attendances of all patients at the out-patient clinic:—

For individual attention by medical officer	3388
For intermediate treatment	4800
Aggregate number of in-patient days	532

Orthopædic After-Care Clinic.—This clinic meets once a week, and is attended by a trained Sister from Shropshire Orthopædic Hospital, and an Orthopædic Surgeon from that Hospital attends each month. We have been fortunate so far in getting the services of the Surgeon free of charge, and for that great benefit we thank the Authorities of the Shropshire Orthopædic Hospital and the Agnes Hunt Home.

The local clinic is managed by a voluntary committee under the Cheshire Federation of Maternity and Child Welfare, while the necessary help in fitting appliances and seeing that they are kept in proper order is done by voluntary workers from St. John Ambulance Association and the Red Cross Society. We are extremely indebted to those workers, without whose help the work could not be done. There are now about 90 crippled children under treatment or supervision, and excellent results are being obtained.

Hospitals provided or subsidised by the Local Authority.—The Local Authority provides an infectious diseases hospital at Sealand. There are 64 beds provided for infectious diseases, and agreements have been made with certain Authorities in the neighbourhood for the use of a certain number of beds. The Chester Rural District retain 5 beds, Hoole Urban District 4 beds, and Tarvin 8 beds, while the Medical Superintendent can give extra accommodation if it is available.

There is, also at Sealand, provision made for the treatment of 26 cases of advanced tuberculosis. The pavilions for this purpose are situated in a field adjoining the hospital grounds proper, and are administered from the same administrative block. Of the 26 beds provided, 6 have been let to the County Authority.

There is also at the hospital a discharge block, steam laundry, disinfection station, mortuary and garage. The overcrowded condition of the administrative block mentioned in last year's report continues, it having been impossible as yet to make any addition.

During the year, 256 patients were treated in hospital for some form of infectious disease, and 27 who were suffering from tuberculosis.

The following table shews the number of cases treated for different diseases, and also those belonging to the City and to

outside districts:—

	City Cases.		Other Districts.		Total
Scarlet fever	64	...	43	...	107
Diphtheria	29	...	25	...	54
Enteric fever	1	...	12	...	13
Cerebro spinal fever ...	0	...	1	...	1
Tuberculous disease ...	20	...	7	...	27
Other conditions	17	...	3	...	20
	131	...	91	...	222
Sent to Hospital for cleansing					61

The mildness of much of the infectious disease present during the year led to not infrequent changes in diagnosis, particularly in the case of scarlet fever. Although the number of patients has been comparatively few, the number of wards to be kept open has been the same.

There were 8 deaths during the year, of patients suffering from infectious disease, two of whom belonged to the City.

Patients suffering from tuberculous disease treated in hospital numbered 27, of whom 20 belonged to the City and 7 to the County.

A small-pox hospital is situated about half-a-mile from Sealand Hospital, and contains ten beds in two equal-sized wards. It is kept ready for use at short notice, and the staff is revaccinated as occasion requires, so that they are always ready for an emergency.

Ambulance facilities.—One motor ambulance is provided by the Local Authority for the removal of accidents or non-infectious cases to the Royal Infirmary or other nursing home. The Royal Infirmary authorities also provide an ambulance. There are two motor ambulances at the Isolation Hospital for the removal of infectious cases from the City and surrounding districts.

6. LABORATORY WORK.

The laboratory of the Local Authority is available for the bacterial examination of pathological or suspected clinical material sent by medical practitioners in town. The work is done free. In those cases where a fee could reasonably be paid the material is generally sent to the John Elliot Memorial Laboratory at the

Royal Infirmary. Besides clinical material sent by practitioners, the laboratory is used in the examination of contacts of diphtheria and for all the laboratory work of the Isolation Hospital.

A fortnightly bacteriological examination of the City water supply and a monthly chemical examination is also done, while for the last eighteen months the bacteriological examination of milk has been undertaken.

The following table shews the amount of clinical work done:—

PATHOLOGICAL WORK, 1923.

Material.	Examined for	Positive.	Negative.	Total.
Swab	Diphtheria	26 ...	379 ...	405
Sputum	Tubercle bacillus	27 ...	108 ...	135
Urine	Albumin.....	2 ...	3 ...	5
Urine	Tubercle bacillus.....	1 ...	2 ...	3
Urine	Casts	1 ...	0 ...	1
Urine	Type of germ	1* ...	0 ...	1
Blood	Leucocyte count	— ...	— ...	1
Blood	Widal's reaction	1 ...	4 ...	5
Faeces	Dysentery germs	0 ...	1 ..	1
Faeces	Bacillus typhosus	3 ...	18 ...	21
Smear	Gonococcus	1 ...	1 ...	2
Fluid	Cerebro spinal	3 ...	1 ...	4
Ear swab.....	Type of germ	— ...	— ...	—
Swab (eye) ...	Gonococcus	1 ...	0 ...	1
Hair	Ring worm	19 ...	12 ...	31
		— ...	— ..	—
	Totals	91 ...	552 ...	643

* Bacillus Coli.

Diphtheria antitoxin continues to be issued free to local practitioners for use in necessitous cases.

About 200 samples of water, and 66 samples of milk, were examined bacteriologically; and 12 samples of water were examined chemically. In addition, a large number of examinations, both chemical and bacteriological, were made in connection with the opposition to the Warrington Water Bill.

WATER SUPPLY EXAMINATIONS.

A fortnightly bacteriological examination is made of the water from each individual filter in use by the Water Company, and also

of water from a consumer's tap, and of the untreated river water. A chemical examination of water from a consumer's tap is made monthly.

The chemical examination of the water does not give information of great value. Such an examination may detect pollution, and so separate a pure from an impure water, but the river is known to be polluted, and a chemical examination while capable of detecting variations in the pollution tells little that is reliable of the nature or danger of the contamination. The chemical composition of the river water varies within considerable limits, depending on the amount of flood water or water from the upper reaches present. While the figures indicating pollution have frequently been higher than the accepted limits for a river supply they have not shewn the presence of dangerous pollution.

The results of the chemical examinations of the water supply are set out below:—

CHEMICAL ANALYSIS OF CITY WATER SUPPLY, 1923.

Date 1923.	SOURCE	Chlorine	Free Ammonia	Albumoid Ammonia	Oxygen absorbed in 1 hour	Oxygen absorbed in 4 hours
		Parts per 100,000				
Jan. 17th	Trinity Court, Trinity Street ...	1·8	·0021	·0106	·0676	·160
Feb. 14th	Posnett's Court, Watergate Row ..	1·6	·0013	·0154	·173	·291
March 21st	Parry's Court, Princess Street ...	2·0	·0016	·0075	·041	·132
April 18th	Laboratory Tap	1·5	·0013	·0146	·063	·163
May 23rd	Edwards' Court, Princess Street ...	1·7	·0012	0106	·055	1457
June 20th	Jones' Court, Princess Street	1·7	·0020	·0084	·062	·110
July 4th	Athol Place, Crook Street	2·6	·0008	·008	·0308	·095
Aug. 15th	Horton's Court, Goss Street	2·1	·0040	·0132	·128	·196
Sept. 12th	Coleclough's Court, Watergate Row ..	2·0	·0048	·0148	·096	·212
Oct. 16th	Jonas' Court, Princess Street	1·2	·0021	·0134	·208	·332
Nov. 14th	Athol Place, Crook, Street	1·4	·0016	0130	1304	·216
Dec. 12th	Edwards' Court, Princess Street ...	1·4	·0009	·0076	·12	·20

BACTERIOLOGICAL EXAMINATIONS.

The standard of bacteriological purity which is aimed at is a low one. *Bacillus coli* of "Flaginac" type of Houston ought not to be present in 10 cubic centimeters of the water. Many water authorities now work to 100 c.c. standard, and some tests have been done to this scale.

The purification of the water carried out by the Water Company continues to be well done, and "Flaginac" *B. coli* were found in

water from the Company's filters on four occasions only, and in water from the consumer's tap on 3 occasions. On examining 100 c.c. for the presence of "Flaginac" B. coli, the results are naturally not so good. One hundred cubic centimeters were examined on 51 occasions, and 18 samples shewed the presence of typical B. coli, being 35 per cent. of those examined. The larger proportion of those samples were taken in the autumn months, when bad results are more likely. In the current year, 100 c.c. samples are being examined as routine and criticism of the results will be possible. The raw river water shews the presence of typical B. coli generally in 0.1 c.c., and occasionally only in 0.5; very rarely in 0.01 c.c. With the tide over the weir and a low river it is found in 0.01 c.c.

The Warrington Water Bill shewed the danger Chester is in of having its source of water supply seriously endangered by any Authority who can get powers to abstract the pure upland waters flowing into the Dee. Such abstraction may leave Chester with practically only the surface water from the cultivated and fairly densely populated Dee Valley. Means ought to be taken by the formation of a Conservancy Board for the Dee Valley, or otherwise not only to ensure our supply but to enforce the removal or proper treatment of sources of contamination.

The results of the bacteriological examination of the water is given below:—

Bacteriological Examination of City Water Supply, 1923.

Date.	Unfiltered River Water.		Filter 1.		Filter 3.		Filter 4.		Filter 5.		Filter 6.		Filter 7.		Filter 8.		Consumers' Tap.	
	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)	Gel. (1)	Agar. (2)	B. Coli (3)
1923																		
Jan. 10	5500	260	10 X	7	G.O.	—	24	G.O.	—	off cleaning	20	G.O.	4	G.O.	—	31	8	—
Jan. 24	9150	410	10 X	23	6	—	61	G.O.	—	off cleaning	20	5	Liq.	5	—	17	0	—
Feb. 7	1400	G.O.	10 X	10	G.O.	—	6	G.O.	—	Liq. G.O.	18	G.O.	14	G.O.	—	Liq.	G.O.	—
Feb. 21	6450	1200	1 X	13	7	—	9	3	—	off cleaning	11	2	21	5	—	20	3	X
Mar. 14	9000	G.O.	10 X	12	G.O.	—	10	G.O.	—	off cleaning	2	G.O.	12	21	—	19	G.O.	—
Mar. 26	3900	G.O.	0.1 X	off cleaning	7	6	12	1	—	5 G.O.	12	7	7	3	—	21	G.O.	—
April 11	1300	G.O.	0.5 X	6	3	—	14	5	—	19	3	—	10	3	—	10	G.O.	—
April 25	3000	550	1 X	14	2	—	22	3	—	12	1	—	10	2	—	6	2	—
May 16	6200	2000	1 X	15	1	—	off cleaning	—	—	65	2	X	20	1	—	18	3	—
May 30	9050	205	10—	7	G.O.	—	48	6	—	11 G.O.	29	G.O.	off cleaning	—	—	22	5	—
June 14	Liq.*	7100	1 X	Liq.*	4	—	Liq.*	2	—	Liq.*	6	—	Liq.*	6	—	Liq.*	4	—
June 27	900	200	1—	11	1	—	14	10	—	52	16	—	17	2	—	16	4	—
July 10	350	1400	0.5 X	9	2	—	5	2	—	8	6	—	26	4	—	4	4	—
July 18	600	160	10 X	34	4	—	off cleaning	—	—	off cleaning	6	2	22	5	—	13	11	—
Aug. 8	1200	225	0.1 X	Liq.	7	—	Liq.	4	—	16	11	—	Liq.	4	—	10	8	—
Aug. 22	†	410	0.5 X	†	4	—	†	8	—	off cleaning	†	8	†	5	—	†	7	—
Sept. 5	400	565	10 X	Liq.	80	—	23	6	—	Liq. 5	6	8	off cleaning	—	—	Liq.	2	—
Sept. 26	10400	518	0.1 X	4	—	—	off cleaning	—	—	off cleaning	Liq.	9	Liq.	3	—	Liq.	5	—
Oct. 17	1320	725	0.1 X	3	4	—	Tap off	—	—	Tap off	Tap off	—	Tap off	—	—	Liq.	9	—
Oct. 24	3250	1830	0.1 X	19	13	—	Tap off	—	—	Tap off	12	9	14	7	—	28	52	—
Nov. 7	Liq.*	2900	0.1 X	Liq.*	4	—	Tap off	—	—	Tap off	Liq.*	3	Liq.*	5	—	19	9	—
Nov. 21	6300	470	0.1 X	12	3	—	Tap off	—	—	Tap off	24	7	16	12	—	Liq.*	5	—
Dec. 5	12100	140	0.1 X	9	1	—	Tap off	—	—	Tap off	7	2	20	12	X	19	6	—
Dec. 19	2950	465	0.1 X	6	4	—	9	5	—	off cleaning	8	2	6	4	—	25	G.O.	—
																6	5	—

REFERENCE:—

—Negative.

X—Positive.

G.O.—Agar Grown over.

Liq.—Gelatine Liquefied.

* —Cool Incubator faulty.

† —Incubator undergoing repair.

LIST OF ADOPTIVE ACTS, BYE-LAWS, AND LOCAL REGULATIONS IN FORCE IN THE DISTRICT.

Public Health Acts Amendment Act, 1890.
 Infectious Diseases (Prevention) Act, 1890.
 Notification of Births Act, 1907.
 Public Health (Prevention and Treatment of Disease) Act, 1913.
 Public Health (Tuberculosis) Act, 1921.
 Rats and Mice (Destruction) Act, 1919.
 Baths and Wash Houses Act, 1907.
 Private Street Works Act, 1892.
 Public Improvements Act, 1860.
 Chester Improvement Acts, 1845, 1884.
 Bye-Laws as to Obstructions, Encroachments, and Nuisances, 1879.
 Bye - Laws under the Dairies, Cowsheds, and Milkshops Order 1885, 1904.
 Bye-Laws for the Regulation of Slaughter-houses, 1909.
 Bye-Laws for the Regulation of Common Lodging Houses, 1909.
 Houses and Parts of Houses Let in Lodgings Regulations, 1867.
 Bye-Laws in respect of Nuisances, 1887.

7. SANITARY ADMINISTRATION.

SANITARY INSPECTION OF THE DISTRICT.

Canal Boats Acts, 1877 and 1884.

The total number of canal boats registered under the above Acts in 1923 was 464. There were four new registrations and no cancellations.

The inspection of 124 boats shewed one contravening the regulations, and the defect was remedied on the service of a notice. The cabin accommodation is sufficient for 430 persons, but the actual population was only 375. This number included 136 adult males, 101 adult females, 97 children of school age, and 51 under five years. Particulars of the work done will be found at the end of the report.

Factory and Workshops Act, 1909.

The number of factories and workshops on the register at the end of the year was 182—eleven less than last year. The type of work carried out was as follows:—

Dress	55
Boot and Shoe	15
Bakehouses	40
Cabinet-making	6
Miscellaneous	66
Total	182
Visits made	241
Defects found	29
Defects remedied	29

Sanitary condition of Schools.

The sanitary condition of the schools is kept satisfactory by constant inspection during medical inspection, and having the defects remedied as they arise.

Home Workers.

The homes of out-workers were regularly inspected, and were found satisfactory. Twenty-two lists were received by the department, giving particulars of 30 persons.

Food Inspection.

Recurring cases of foot and mouth disease have affected the movement of cattle, sheep and pigs in the district to a considerable extent, and has led to the slaughtering of many food animals outside our district. This entailed a large amount of inspection of meat in the retailers' premises, which is not very convenient either from the point of view of the retailer or our own. During this time a large proportion of the meat supply was drawn from Birkenhead Smithfield. The motor transport used in the conveyance of all this meat to the City was a distinct improvement on the usual rail transport from the point of view of cleanliness and the condition of the meat. The slaughter-houses have been kept in a reasonably clean condition, and in fair repair, but many are unsatisfactory in position and in accommodation.

Bye-law number 9, "for preventing cruelty in slaughter-houses" has been in operation for fully a year. Three contraventions have been reported to the Public Health Committee, and the individuals concerned officially warned. It has not been found necessary to

apply to the Magistrates while dealing with meat unfit for human consumption.

Butchers have voluntarily called the attention of your inspectors in many instances to the condition of doubtful meat, and the following condemned foodstuffs were voluntarily surrendered and destroyed:—

Beef—Carcases	15
Portions of carcasses	4
Portions of imported carcasses	7
Canned meat	1
Carcases of calves	2
Carcase of sheep	1
Carcase of pig	1
Rabbits	28
Imported eggs	824
Baskets of mushrooms	5
Baskets of tomatoes	11
Boxes of plums	6
Boxes of fish	1
Boxes of pears	4
Cartons of sausage	2
Tins of crayfish	150

The estimated weight of condemned food, not including offal, was 4 tons, 2 qrs., 124 lbs.

The reason for condemnation was as follows:—

Tuberculosis—

Carcases of beef	14
Portions of carcasses of beef	4
Pyæmia—beef carcase	1
Pneumonia—carcase of sheep	1
Nephritis—carcase of calf	1
Joint ill—carcase of calf	1
Febrile—carcase of pig	1
Contusion—imported beef	1

The remainder of the foodstuffs condemned was decomposed.

The inspection of meat and other foods, slaughter-houses, and places where food is prepared has been regularly carried out. So

as to render help in this work the recently-appointed Assistant Inspector was required to have the Food Inspector's Certificate.

The following visits were made:—

Slaughter-houses	416
Butchers' shops	386
Fish shops	246
Other food shops and stores	405
	1453

SALE OF FOOD AND DRUGS ACTS, 1875-1907.

The following table sets out the samples of food submitted for analysis under the above-named Acts:—

Name of Article.	No. Not Genuine.	No. Genuine.	No taken Formally.	No. taken Informally	Totals.
Milk	9	32	41	..	41
Butter	1	9	10	...	10
Cocoa	...	6	6	...	6
Cream	2	4	6	...	6
Cheese	...	5	5	...	5
Baking Powder	...	3	3	...	3
Biscuits	...	3	3	...	3
Cake	3	...	3	...	3
Coffee	...	3	3	...	3
Custard Powder	...	3	3	...	3
Dripping	...	3	3	...	3
Flour	...	3	3	...	3
Margarine	...	3	3	...	3
Pepper	...	3	3	...	3
Rice	...	3	3	...	3
Sweets	1	2	3	...	3
Tea	...	3	3	...	3
Beer	1	1	2	...	2
Egg Powder	2	...	2	...	2
Jam	...	2	2	...	2
Lard	...	2	2	...	2
Malt Vinegar	...	2	2	...	2
White Pepper	...	2	2	...	2
Whisky	1	1	2	...	2
Beef	...	1	...	1	1
Cream Cheese	...	1	1	...	1
	20	100	119	1	120

Of the total 41 samples of milk submitted for analysis, 9 were found to be unsatisfactory for the following reasons:—Three samples contained added water varying from 1·8 per cent. to 9·1 per cent;

three were deficient in fatty solids, varying in amount from 0·3 per cent. to 9·3 per cent.; three contained sediment, three-quarters of which consisted of dung, and two of these samples also contained added water. The amount of sediment present in the samples varied from 6·7 parts per 100,000 to 13·3 parts per 100,000.

Practically 22 per cent. of the samples were unsatisfactory, which is by far the worst result we have had for some years. There is at present a movement to encourage the use of milk amongst the community at large, and the department is doing what it can to encourage that movement, but results like this make the wisdom of such action doubtful so far as Chester is concerned.

Two samples of cream and 3 of cakes were found to contain preservative. In the case of the cream samples, notice was given at the time of purchase that the cream was preserved, and the notice conformed with the requirements of the Milk and Cream Regulations. The three samples of cakes contained only very small quantities of preservatives, which had been present presumably in the margarine used in the making.

The very wide use of preservatives in foods in practice at the present time urgently requires legislative action to regulate or prohibit their use.

One sample of beer contained an excess of salt over that usually found, but as there is no standard recognised no action could be taken.

One sample of whiskey was found to be 37·8 degrees under proof, which is 2·8 degrees below the prescribed strength.

The action taken in respect of the samples not conforming to standard is given in the following tabular statement:—

No. of Sample	Name of Article	Result of Analysis.	Result of Legal Proceedings or action taken by the Committee.
10	Milk ...	Contained 2.4 per cent. of extraneous water.	After considering the circumstances the Public Health Committee instructed the Town Clerk to call the attention of the vendor to the result of the analysis.
15	Milk ...	Contained 13.3 parts per 100,000 of sediment, three-quarters of which consisted of dung, and did also contain 9.1 per cent. of extraneous water ...	Proceedings were not instituted in this case as, when samples No. 25 and 26 were "taken in course of delivery" from the wholesale dealer to the local milk seller the analyses were found to correspond.
25	Milk ...	Contained 10 parts per 100,000 of sediment, three-quarters of which consisted of dung	Fined £5 and £1 os. 6d. special costs.
26	Milk ...	Contained 6.7 parts per 100,000 of sediment, three-quarters of which consisted of dung, and did also contain 2.4 per cent. extraneous water	Fined £5 and £1 os. 6d. special costs, Cheshire County Council Inspectors, by request, obtained "samples in course of delivery" to the wholesale dealer from the producer, and their investigations were satisfactory.
52	Milk ...	Deficient in 0.3 per cent. of fat ...	After considering the circumstances the Public Health Committee instructed the Town Clerk to call the attention of the vendor to the result of the analysis.
56	Milk ...	Deficient in 1.70 per cent. of fat ...	Ditto.
57	Milk ...	Deficient in 9.3 per cent. of fat ...	Case dismissed on payment of £1 costs.
68	Egg Powder...	Contained rice flour containing 22.4 per cent. of a mixture of acid potassium tartrate and sodium bi-carbonate coloured with turmeric	Proceedings were not instituted in this case, as the package was labelled as required by Section 8, Sale of Food and Drugs Act. 1875.
69	Egg Powder...	Ditto.	Ditto.

No. of Sample.	Name of Article.	Result of Analysis.	Result of Legal Proceedings or action taken by the Committee.
70	Cream	Contained 0.16 per cent. of boric acid	Sold as "Preserved Cream," and was properly labelled.
71	Cream	Contained 0.18 per cent. of boric acid	Ditto.
75	Butter	Contained 5.1 per cent. excess of water	Fined £2 and 15/6 special costs.
85	Milk ...	Contained 5.1 per cent. extraneous water	Case withdrawn on the wholesale dealer supplying same being fined in respect of sample No. 86, which was "taken in course of delivery."
86	Milk ...	Contained 1.8 per cent. extraneous water	Fined £5 and 15/6 special costs.
100	Beer ...	Contained 76.2 grains of sodium chloride per gallon	The Town Clerk communicated with the Minister of Health, and, as a result, it was not considered desirable to institute proceedings.
101	Whiskey	Contained 2.8 per cent. or water in excess of the standard	Proceedings instituted. Case dismissed on payment of £1 os. 6d. costs.
104	Sweets	Contained 1.65 per cent. of chloroform, equal to 7.2 grains per ounce (avd.)	The Town Clerk was instructed to call the attention of the vendor to the result of the analysis.
106	Cake ...	Contained 0.03 per cent. of boric acid, equal to 2.1 grains per lb. of cake	Proceedings were not instituted by reason of the small amount of preservative present in the sample.
107	Cake ...	Contained 0.05 per cent. of boric acid, equal to 3.5 grains per lb. of cake	Ditto.
108	Cake ...	Contained 0.085 per cent. of boric acid, equal to 5.9 grains per lb. of cake	Ditto.

The following statement shows the composition of the samples of milk examined:—

Date.	Sample No.	Fat %	Solids not Fat %	Date.	Sample No.	Fat %	Solids not Fat %
16th Jan.	7	4'42	9'03	24th April.	46	3'33	8'95
	8	4'12	9'1		47	3'52	9'07
	9	5'38	8'54		48	3'22	9'23
	10	3'29	8'30		49	3'44	9'14
	11	4'29	8'76		50	3'27	8'98
	12	4'25	8'66	4th June.	51	3'78	8'67
	13	3'47	9'1		52	2'99	9'0
	14	3'45	9'09		53	9'72	7'46
	15	3'14	7'73		54	5'61	8'95
	16	3'0	9'07		55	3'24	8'96
	17	4'59	9'36	7th June.	56	2'95	8'83
	18	3'8	8'91		57	2'72	9'12
	19	3'44	9'15		62	3'95	8'58
	20	4'26	8'58		63	3'07	8'63
	21	3'55	8'93	24th Sept.	80	4'1	8'9
	22	3'59	8'58		81	3'6	9'03
	23	3'52	8'7		82	4'7	8'96
	24	4'15	9'22		83	3'85	9'05
18th Jan.	25	4'41	8'80		84	3'52	9'0
	26	4'08	8'30	27th Sept.	85	3'83	8'07
					86	3'71	8'35

The average composition of the 41 samples submitted for analysis was Fat 3'91 per cent ; Non-fatty Solids 8'8 per cent., as compared with 3'5 per cent. Fat and 8'8 per cent. Non-fatty Solids respectively in 1922. The average composition of the Milk maintains a satisfactory standard as far as quality is concerned.

Bacteriological examination of Milk.

Twelve samples of milk were examined for the presence of tubercle bacilli, six at the University of Liverpool and six at the John Elliot Laboratory, Chester Royal Infirmary. One of the 12 was found to be infected, and the circumstances were reported to the Medical Officer of Health for the district from which the milk came. Subsequently the affected cow was detected and slaughtered.

Sixty-six samples were examined for the number of germs present, and for the presence of bacillus coli. Any sample found to contain more than 100,000 germs per cubic centimeter was taken to be unsatisfactory. Similarly, no sample should contain bacillus coli in 0'1 of a cubic centimeter. Judged on this standard, 31'8 per cent. of the samples (21 in number) were found to contain too many germs, and 60'6 per cent. were found with bacillus coli in the tenth part of a cubic centimeter (about two drops). All the samples contained this germ in one cubic centimeter (about 20 drops). As the great majority of the samples is taken and examined within six or eight hours of milking, the results must be regarded as very unsatisfactory. It has been shewn repeatedly that even in a cow-shed of old construction and without modern

improvements it is quite possible to produce milk of a high grade of cleanliness. Attention to detail in the process of milking with scrupulous cleanness in every stage is a matter of habit which should be easily within the competence of the Cheshire dairymen. In every case where the bacterial count has exceeded 100,000 per cubic centimeter the vendor of the sample and the Medical Officer of Health of the district in which the milk is produced is written to. Along with the letter to the vendor or producer the following statement of procedure to be followed with the view of producing clean milk has been sent. I repeat it from last year's report in the hope that it may receive a little more attention.

The following procedure should be adopted with the view of producing clean milk:—

A. General.

1. The cows must be groomed and kept clean.
2. The long hairs on the cow's udder ought to be kept cut.
3. The milk from a cow shewing any signs of illness or any disease of the udder should not be used.
4. The cow-shed should be light and well ventilated.
5. The cow-shed ought to be cleaned and the cows fed and laird at least half-an-hour before milking.

B. At Milking.

1. With a clean cloth and clean cold water wipe the udder and teats of the cows.
2. Dry udder and teats with a clean cloth.
3. Put on a clean overall.
4. Wash hands with soap and water, and dry with clean towel.
5. Milk in dry method.
6. Reject first few squirts of milk from each teat into separate vessel.
7. Milk into covered or hooded pail.
8. Immediately cool the milk to 50°.

C. Care of Vessels.

All vessels used to hold or store milk ought to be cleaned in the following manner:—

1. Rinse out with clean cold water.
2. Scrub with hard brush and boiling water and soda.
3. Rinse thoroughly with clean hot water.
4. Sterilize the vessels either with boiling water or steam, or boil the vessels.
5. Invert the vessels while hot so as to allow them to drain and dry.

The following table gives the results of the bacteriological examination of milk;—

BACTERIOLOGICAL EXAMINATIONS OF MILK, 1923.

Month.	Sample No.	Germs per cubic Centimetre.	Bacillus Coli.			
			1'0	0'5	0'1	
January	1	34,000		×	—	
	2	890,000			×	*
	3	302,700			×	*
	4	71,500			×	
	5	270,000			×	*
	6	54,000		×	—	
February	7	86,000		×	—	
	8	270,000			×	*
	9	54,000		×	—	
	10	86,000		×	—	
	11	Grown over		×	—	
	12	1,281,200		×	—	*
	13	160,000			×	*
	14	Grown over			×	
	15	101,700		—		*
	16	760,000		—		*
April	17	2,790			×	
	18	11,250			—	
	19	7,640			—	
	20	5,100			—	
	21	13,400	×		—	
	22	Examination Unsatisfactory				
May	23	30,000	×		—	
	24	Plates Grown Over	×		×	
	25	3,527	×		—	
	26	8,550	×		—	
	27	Growths too Irregular	—		×	
	28	Plates not Reliable (1,354,000)	×		—	
June	29	35,250	×		—	
	30	66,100	×		—	
	31	30,600	×		—	
	32	18,000	×		—	
	33	20,250	×		—	
	34	29,000	×		×	
	35	24,075	×		×	
	36	61,500	×		×	
July	37	94,500	×		—	
	38	Uncountable	×		×	
August	39	Too numerous to count	×		×	*
	40	595,000	×		×	*
	41	216,500	×		×	*
	42	1,047,000	×		×	*
	43	36,600	×		×	
	44	20,700	×		×	
September	45	10,433	×		×	
	46	Uncountable	×		×	*
	47	248,000	×		×	*
	48	31,200	×		×	
October	49	401,500	×		×	*
	50	31,300	—		—	
	51	42,100	×		×	
	52	39,300	×		×	*
	53	164,000	×		×	
	54	50,200	×		×	
	55	Grown over	×		×	
	56	30,900	×		×	
November	57	33,900	×		×	
	58	27,400	×		×	
	59	82,000	×		×	*
	60	218,000	×		×	
	61	89,800	×		×	
	62	41,000	×		—	*
December	63	154,500	×		×	*
	64	142,500	×		×	*
	65	300,000	×		×	*
	66	Uncountable	×		×	

NOTE.—*In each case where the number of germs exceeds 100,000 per c.c. the vendor of the sample and the Medical Officer of Health for the district of source of supply have been written to and attention called to the high count.

One licence to sell Pasteurised milk has been issued during the year. This milk, Pasteurised outside our district, is brought into town in ordinary milk churns, and is distributed to retailers in the ordinary way. It appears to be open to contamination at any time after Pasteurisation, so that any benefit derived from the process is likely to be lost. The production of clean bottled milk is not practised in Chester district so far as I know. The deterrent factor in some cases is, I believe, the fear that there is no market for such milk. The experience of other districts can be taken as a guide, and if the market is not immediately available one would not have to wait long for it.

The Chadwick Trust very kindly arranged for two lectures to be given in Chester during the year. The lectures were free, were held on market days when the farmers would be in town, and were freely advertised both in the press and by hand bills distributed at auction cattle sales and on market days. At both lectures the attendance was disappointing. The lectures were most instructive, and various processes in milking, Pasteurising, and bottling milk were shewn on the screen.

Dairies, Cow-sheds and Milkshops Orders.

Work done under these Orders is detailed below:—

Registered cow keepers	19
Inspections	57
Contraventions	12
Contraventions remedied	12
Milk sellers registered	54
Milk sellers also producers	35
Inspections	73
Contraventions	17
Need of lime washing	12
Choked drains	2
Defective paving	3
Contraventions remedied	17

PUBLIC HEALTH (MILK AND CREAM) REGULATIONS,

1912-1917.

Report for the Year ended 31st December, 1923.

1. Milk and Cream not sold as Preserved Cream:—

	(a) No. of Samples Examined for the Presence of a Preservative.	(b) No. in which a Preservative was Reported to be present.
Milk	41	Nil
Cream	Nil	Nil

Nature of preservative in each case in column (b), and action taken under the Regulations in regard to it—Nil.

2. Cream sold as Preserved Cream—

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label, as to preservative, were correct—

- (i) Correct statements made 6
 (ii) Incorrect statements made Nil
 (iii)

No. of Sample.	Percentage of Preservative found in each sample.	Percentage stated on Statutory Label.
58	0.35 % Boric Acid.	Not exceeding 0.4 %
59	0.19 % " "	" "
60	0.17 % " "	" "
61	0.25 % " "	" "
70	0.16 % " "	" "
73	0.18 % " "	" "

(b) Determinations made of milk fat in cream sold as preserved cream—

- (i) Above 35 per cent. 6
 (ii) Below 35 per cent. Nil

(c) Instances where, apart from analysis, the requirements as to labelling or declaration of preserved cream in Article V. (1) and the proviso in Article V. (2) of the Regulations have not been observed—Nil.

(d) Particulars of each case in which the Regulations have not been complied with and action taken—Nil.

3. Thickening substances —

Any evidence of their addition to cream or preserved cream. Action taken where found—Nil.

4. Other observations, if any—Nil.

REGISTRATION OF WHOLESALE DEALERS IN MARGARINE AND MARGARINE CHEESE.

(Sale of Food and Drugs Acts, 1887-1899).

The number of wholesale dealers in margarine on the register is 15, the same as last year. The premises continue to be kept in a satisfactory condition.

FRIED FISH SHOPS.

One new shop was added to the list of premises cooking fish and chipped potatoes, making a total of 35. The premises are regularly visited during the day, and special inspections are made in the evening when cooking is in progress. The premises are kept in fairly satisfactory condition, and in some instances give rise to no reason for complaint. In others the smell is most objectionable, which is in part due to the nature of the fat used in cooking. In other cases the situation of the premises is not suitable. We are greatly in need of bye-laws for the regulation of the business, which is of considerable economic importance.

PUBLIC ANALYST'S REPORT.

Sale of Food and Drugs Act.

The following report on the examination of foods during the year is submitted by the Public Analyst:—

I have the honour to inform you that during the year 1923 I received one hundred and twenty samples for analysis, consisting of 41 milk, 6 cocoa, 10 butter, 5 cheese, 5 pepper, 6 preserved cream, 3 coffee, 3 dripping, 3 tea, 3 rice, 3 baking powder, 3 margarine, 3 cake, 3 biscuits, 3 custard powder, 3 self-raising flour, 3 sweets, 2 egg powder, 2 malt vinegar, 2 jam, 2 lard, 2 beer, 2 whisky, and 1 each of cream cheese and meat.

The following fifteen samples were adulterated:—

No. 10 Milk.....	2·4% of added water	
No. 15 „	9·1% of added water and 13·3 parts Per 100,000 of sediment, chiefly dung	
No. 25 „	10 parts per 100,000 of sediment, chiefly dung.....	Fined £5 and costs
No. 26 „	6·7 parts per 100,000 of sediment, chiefly dung, and 2·4% of added water.....	Fined £5 and costs

No. 56	1.7% deficiency in fat	Costs only £1
No. 57	9.3% " "	
No. 85	5.1% of added water	Fined £5 & costs 15/6
No. 86	1.8% " "	
No. 68 Egg Powder...	No egg constituents present in sample	Informal
No. 69	No egg constituents present in sample	
No. 7 Butter.....	15% of cocoanut oil	Fined £2 & costs 15/6
No. 75	5.1% excess of water.....	
No. 100 Beer	76.2 grains per gallon of sodium chloride.....	Costs only 20/6
No. 101 Whisky	2.8% excess of water.....	
No. 104 Sweets	7.2 grains of chloroform per ounce...	

Both egg powders were simply baking powders coloured with turmeric, and contained none of the constituents of eggs.

The whisky sample was 37.8 degrees under proof, whilst the present standard is 35 degrees under proof. The standard before the War was 25 degrees under, or 10 degrees higher than the present one.

There is no standard for salt in beer, but the amount present in sample No. 100 is very high (76.2 grains per gallon), and where the amount exceeds 50 grains per gallon it is advisable for the cause of the excess to be enquired into.

The sample of butter taken informally was found to contain 15 per cent. of cocoanut oil, due no doubt to the vendor mixing margarine with the butter, as much of the margarine is now made from vegetable fats.

The sample of sweets called " Linseed, Liquorice and Chloroform Lozenges " contained 1.65 per cent. of chloroform, or 7.2 grains per oz. The Manufacturers were communicated with, and they admitted that 2 per cent. to 3 per cent. of chloroform was added to the lozenges. There would be no objection so such lozenges if they were sold only by Pharmaceutical Chemists as a drug, but it is certainly not safe for such a powerful drug as chloroform to be a constituent of sweets that may be bought by children at any sweet shop and possibly eaten in large quantities.

There have been six prosecutions during the year, and in three cases fines of £5 and costs were inflicted; in another case £2 and

costs; whilst the other two cases were dismissed on payment of costs

Milk samples Nos. 85 and 86 refer to the same milk. No. 85 was a sample from the retailer, and No. 86 was taken on the following day from the farmer's milk cart supplying the retailer with milk. Both samples were adulterated, but the prosecution was instituted against the farmer only.

The samples of cocoa were examined specially for arsenic, and were found to be quite free from any trace. The samples of beer, malt vinegar, baking powder, sweets, and self-raising flour were also free from any trace of arsenic.

The amount of butter fat in the five samples of cheese examined varied from 20.5 per cent. to 34.7 per cent. There is no doubt that standards for cheese are badly wanted. In the United States three standards for cheese are in use, one for whole milk, one for half skim, and one for skim milk cheese.

All the samples of margarine, preserved cream, cakes, and a few of the samples of butter contained boric acid, but within the limits allowed. The amount present in the cakes was very small, the highest amount being 6 grains per lb.. From the small amount present, no doubt the boric acid was introduced with the margarine and not by the use of liquid eggs.

The samples of rice were all pure rice, unfaced with steatite. The samples of strawberry jam and raspberry jam were free from preservative, from artificial colouring matter, and from apple pulp.

The quality of the milk for the year is not satisfactory, as eight samples out of forty-one are adulterated, being either contaminated with cow dung or below the milk standards.

(Signed) HAROLD LOWE,

Deputy City Analyst.

THE EXPOSURE OF VARIOUS ARTICLES OF FOOD TO CONTAMINATION.

Last year some observations were made on the exposure of meat, fish, bread and milk to infection during their sale and delivery.

The slight improvement since last year consists of the wrapping of some of the smaller articles by one of the bakers in the City. No one has yet adopted the wrapping of bread, which is now a common practice in Lancashire towns, and in many other places. Meat and fish continue to be exposed to the dust of the streets, and fish particularly is often wrapped in old newspapers. No milk seller has adopted the habit of wearing clean over-alls or clean sleeves while distributing milk.

RAG FLOCK ACT.

Four samples of flock were purchased and submitted for analysis. The Rag Flock Regulations prescribe that rag flock shall not contain chlorine in excess of 30 parts per 100,000. The analysis of the four samples gave the following results:—

No. 64 contained 19 parts per 100,000 in excess of the 30 parts allowed by the Regulations.

No. 65 contained 3 parts of chlorine per 100,000, and was satisfactory.

No. 66 contained 16 parts per 100,000, and was satisfactory.

No. 67 contained 8 parts of chlorine per 100,000, and was satisfactory.

Proceedings were instituted against the seller of No. 64. The case was dismissed on evidence being given that the flock in question was not rag flock but wool flock. It seems difficult or impossible for an inspector or an analyst to distinguish between a rag flock, which would come under the regulations, and a flock which would not. The evidence given in the case proved that the chlorine present in the sample was derived from the process of manufacture, and not from a deleterious source.

COMMON LODGING HOUSES.

There are four common lodging houses on the register, giving sleeping accommodation to 145 men in 27 rooms. During the year, twenty-six visits were made, and seven contraventions were found. In six cases the premises were dirty, and in one the bedding was in a similar condition.

The following is a tabular statement of the work done by the sanitary department:—

Number of—		No, dealt with
Complaints in respect of nuisances	167	167
Visits in respect of nuisances	2735	
Rooms disinfected after infectious disease		257
Investigations <i>re</i> infectious disease	194	
Matters referred to City Surveyor	45	
Tests applied to drains	457	
Drains found defective	368	
Drains reconstructed	167	
Ashpits abolished	23	
Ashbins provided	383	
Inspections of Courts	420	
Inspections of school premises	24	
Inspections of stables, etc.	232	
Inspections of canal boats	124	
Inspections of factories & workshops	241	
Dairies, cowsheds and milk shops	73	
Inspections of slaughter-houses ...	416	
Inspections of butchers' shops ...	386	
Inspections of fishmongers' shops	246	
Inspections of other food shops...	405	
Inspections of offensive trade premises	68	
Smoke observations	26	
House-to-house (district inspections	141	
Visits to common lodging-houses	26	
Dwellings (inspections and re-inspections)	4466	
The following notices were served:—		
Intimation notices	453	
Statutory notices.....	131	

Of the statutory notices, 28 were under the Housing and Town Planning Act, 1919, and two under the Act of 1909.

RATS AND MICE DESTRUCTION ACT, 1919.

The following table gives particulars of the work done under the above Act:—

RAT CATCHER'S REPORT, 1923.

Month.	No. of Visits.	METHOD.		Rats Caught.
		Traps.	Poison.	
January	189	147	42	192
February	155	123	37	159
March	165	139	27	181
April	179	146	33	159
May	178	152	26	177
June	169	130	39	135
July	158	115	44	148
August	161	132	28	163
September	121	88	34	119
October	179	123	58	182
November	106	61	47	67
December	98	67	33	105
TOTALS ...	1858	1423	448	1787

During "Rat Week," held 5th November to 11th November, about 30,000 baits were laid in sewers, &c., in the City.

The poisons used were "Dalroc" and "Barium Carbonate."

CANAL BOATS ACTS, 1877-1884.

There has been comparatively little business on the Canal during the year owing to slackness of trade and labour disputes. In July, we were warned by the Minister of Health of the risk of smallpox known to exist among the occupants of a canal boat. The occupants of all the boats passing through at that time were examined, but no evidence of the disease was found.

The boats on the whole are kept in a satisfactory state of cleanliness and repair. No case of infectious disease occurred among the canal boat population during the year.

8. PUBLIC HEALTH STAFF.

Whole-time Officers.

1. The Medical Officer of Health, School Medical Officer, and Tuberculosis Officer.

2. Assistant School Medical Officer and Assistant Medical Officer of Health.
3. Chief Clerk.
4. Assistant Clerk and Laboratory Assistant.
5. Chief Sanitary Inspector.
6. District Sanitary Inspector.
7. District Sanitary Inspector.
8. Assistant District Inspector.
9. Labourer.

Female Staff

10. Health Visitor.
11. Health Visitor.
12. Tuberculosis Nurse.

Part-time Officers.

Two Clinical Officers, V. D. Clinic, on the staff of the Royal Infirmary.

Physician: At the Maternity and Child Welfare Clinic.

HOUSING.

General Conditions.—The general position as to housing may be said to be unaltered. In recent years the position has been slowly deteriorating as the number of houses built hardly accommodated the annual increase in population. This year there have been built 43 houses, 25 by private enterprise, and 18 under the Local Authority's housing scheme. Closing orders have been issued in two cases where the houses had become unfit for habitation. The net increase in the number of houses is therefore 41. The increase in population during the year would absorb 35 of those, so that we are only 6 houses to the good. The only reason for giving this the rosy title of improvement is that it is not a retrogression.

Last year I anticipated a fair prospect of considerable improvement, which however has not materialised, and I cannot see any great hope of a marked increase in building, at least in the lower rented houses.

The erection of temporary buildings was again advocated, but the rocks of finance and the mirage of a nebulous hope of better things leads to the pursuit of bricks and mortar, wherein the chief difficulties lie. There would seem to be a certain choice of alternative methods, e.g., wood; some form of plaster or cement on expanded

metal, a development of ferro concrete construction, and no doubt other methods.

As to the condition of houses generally, further progress has been made in bringing existing houses to a reasonable standard of fitness. During the last three years, 4304 houses have been dealt with either under the Public Health Act or the Housing Act of 1919. Of those, 1247 have been dealt with this year. Under various statutes 1437 houses were inspected, and 1247 found in some measure defective, and have been remedied either with or without the service of notice. The owners of 580 houses remedied the defects without any formal action.

Under the Housing and Town Planning Act, 1919 (Section 28), 28 houses were dealt with. Of these, 8 had been made fit before the end of the year, and 20 were outstanding.

Under the Public Health Act, 1875, 1187 houses were made fit for habitation, in 639 cases after the service of notice. It was necessary in one case for the Local Authority to carry out the work in default of the owner. Two houses were represented with a view to Closing Orders being made, and in one instance a demolition order, issued in the previous year, was carried out.

The following tabular statement sets out the work done in housing under various powers:—

APPENDICES.

HOUSING CONDITIONS.

STATISTICS.—Year ended 31st December, 1923.

1.—GENERAL.

(1) Estimated population	41,610
(2) General death-rate	13'12
(3) Death-rate from tuberculosis	1'00
(4) Infantile mortality	86'2
(5) Number of dwelling-houses of all classes	8,506
(6) Number of working-class dwelling-houses	6,139
(7) Number of new working-class houses erected..	43

2.—UNFIT DWELLING-HOUSES.

I.—*Inspection.*

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	1,437
---	-------

(2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	141
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	2
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	1,247

II.—*Remedy of Defects without Service of formal Notices.*

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers	580
---	-----

III.—*Action under Statutory Powers.*

A. Proceedings under Section 28 of the Housing, Town Planning, etc., Act, 1919:	
(1) Number of dwelling-houses in respect of which notices were served requiring repairs	28
(2) Number of dwelling-houses which were rendered fit—	
(a) by owners	8
(b) by Local Authority in default of owners } Outstanding 31st December, 1922 }	1
(3) Number of dwelling-houses in respect of which closing Orders became operative in pursuance of declaration by owners of intention to close	—
B. Proceedings under Public Health Acts:	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	639
(2) Number of dwelling-houses in which defects were remedied—	
(a) by owners	1,187
(b) by Local Authority in default of owners 32 outstanding 31st Dec., 1923	
C. Proceedings under Sections 17 and 18 of the Housing, Town Planning, etc., Act, 1909:	
(1) Number of representations made with a view to the making of closing Orders	2

(2) Number of dwelling-houses in respect of which closing Orders were made	2
(3) Number of dwelling-houses in respect of which closing Orders were determined, the dwelling-houses having been rendered fit	—
(4) Number of dwelling-houses in respect of which demolition Orders were made	—
(5) Number of dwelling-houses demolished in pursuance of demolition Orders	1
This house was outstanding 31st Dec., 1922.	

CANAL BOATS ACTS, 1877 AND 1884.

4	Number of Boats added to Register in 1923	
—	Number re-registered owing to Structural Alterations.....	
—	Number re-registered owing to other reasons.....	
464	Total number registered to 31st December, 1923	
—	Total number of Registrations cancelled	
464	Actual number of Boats on Register at 31st December, 1923	
124	Number of Boats inspected in 1923	
123	Number of Boats conforming to the Acts and Regulations	
1	Number of Boats infringing the Acts and Regulations	

Total number for which the Cabins were registered— 430.

Total number occupying the Cabins 375

Details of occupation—Male Adults	136
Female Adults	101
Children of School Age..	87
Children under School Age	51

375

Details shewing Numbers Infringing in respect to:—

Number of cases met with		Number of cases remedied.
—	Registration	—
—	Notification of Charge of Master.....	—
—	Absence of Certificate	—
1	Certificate not Identifying Owner with Boat...	1
—	Marking	—
—	Overcrowding	—
—	Partition (Regn. 8, b. ii.)	—

—	...	Females over 12 improperly occupying	—
—	...	Cleanliness	—
—	...	Painting	—
—	...	Ventilation	—
—	...	Dilapidation	—
—	...	Removal of Bilge Water	—
—	...	Without Pump	—
—	...	Refusal of Admittance to Inspector.....	—
—	...	No proper Water Vessel	—
—	...	Without requisite Double Bulkheads	—
—	...	Non-notification of Infectious Disease	—
—	...	No. of Boats detained for Cleansing (not for I/D)	—
—			—
1	..	Total Cases met with. Total Cases remedied	1
—			—
		Numbe. of Legal Proceedings taken	—
		Number of printed Notice Forms issued	1
		Number of Notices attended to	1
		Number still corresponding about	—

CITY AND COUNTY OF THE CITY OF CHESTER.

Table 1.—Vital Statistics of Whole District during 1923 and previous years.

YEAR	Population estimated to Middle of each Year	BIRTHS			TOTAL DEATHS REGISTERED IN THE DISTRICT		TRANSFERABLE DEATHS		NETT DEATHS BELONGING TO THE DISTRICT			
		Un- corrected Number	Nett		Number ‡	Rate	Of Non- residents registered in the District	Of Resi- dents not registered in the District	Under 1 Year of Age		At all Ages	
			Number †	Rate					Number †	Rate per 1000 Nett Births	Number †	Rate
I	2	3	4	5	6	7	8	9	10	11	12	13
1914	39,689	917	925	23·31	597	15·04	64	28	84	90·81	561	14·13
1915	37,716	853	860	21·67	731	19·38	65	13	92	106·9	666	17·65
1916	39,730	856	856	22·65	742	18·67	107	27	78	91·12	662	16·66
1917	40,718 (B) 40,218 (D)	735	744	18·49	576	14·4	68	69	62	83·3	577	14·4
1918	40,718 (B) 40,218 (D)	744	744	22·65	680	18·67	119	112	67	90·05	673	16·66
1919	42,464 (B) 40,764 (D)	759	759	17·87	562	13·78	97	84	64	84·32	549	13·47
1920	42,571 (B) 42,388 (D)	1072	1091	25·62	543	12·81	94	70	75	68·7	519	12·24
1921	41,407	882	895	21·63	595	14·36	91	81	79	88·26	585	14·12
1922	41,451	897	865	20·86	608	14·66	113	77	68	78·6	572	13·79
1923	41,610	829	800	19·22	600	14·41	132	78	69	86·2	546	13·12

Area of District in acres (land and inland water), 2,862.

No. of inhabited houses, 8,506.

Average No. of persons per house, 4·88

* Total deaths occurring in Chester whether of residents or non residents.

† Births and deaths corrected for those births and deaths properly belonging to Chester, but occurring outside the District, or occurring in the District but properly belong outside.

CITY & COUNTY OF THE CITY OF CHESTER. Table III.—Causes of, and Ages at Death during the Year 1923.

CAUSES OF DEATH.		NET DEATHS AT THE SUBJOINED AGES OF "RESIDENTS," WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.													Total Deaths whether of "Residents" or "Non-Residents" in the District.
		WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.													
		At all Ages.	Under 1 year.	1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 35.	35 and under 45.	45 and under 65.	65 and upwards.	
All causes } Certified ... } Uncertified		544 2												2	
1	Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	
4	Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	
5	Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	
7	Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...	
8	Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	
9	Phthisis (Pulmonary Tuberculosis)	...	...	...	...	...	...	...	...	...	...	...	...	...	
10	Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	
11	Other Tuberculous Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	
12	Cancer, Malignant Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	
13	Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	
14	Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	
15	Organic Heart Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	
16	Bronchitis	...	...	...	...	...	...	...	...	...	...	...	...	...	
17	Pneumonia (all forms)	...	...	...	...	...	...	...	...	...	...	...	...	...	
18	Other Diseases of Respiratory Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	Diarrhoea and Enteritis	...	...	...	...	...	...	...	...	...	...	...	...	...	
20	Appendicitis and Typhlitis	...	...	...	...	...	...	...	...	...	...	...	...	...	
21	Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...	...	...	...	
21a	Alcoholism	...	...	...	...	...	...	...	...	...	...	...	...	...	
22	Nephritis and Bright's Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	
23	Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	
24	Other Accidents & Diseases of Pregnancy & Parturition	...	...	...	...	...	...	...	...	...	...	...	...	...	
25	Congenital Debility and Malformation, including Premature Birth	...	...	...	...	...	...	...	...	...	...	...	...	...	
26	Violent Deaths, excluding Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...	
27	Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...	
28	Other Defined Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	
29	Diseases ill-defined or unknown	...	...	...	...	...	...	...	...	...	...	...	...	...	
Totals		...	...	...	...	...	...	...	...	...	...	...	...	...	

CITY AND COUNTY OF THE CITY OF CHESTER.

Table IV.—Infant Mortality during the Year 1923.

CAUSES OF DEATH											
	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total Deaths 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 9 Months	9 Months and under 12 Months	Total Deaths under 1 Year	
All Causes { Certified. Uncertified.	..	..	..	..	..	..	..	..	..	..	
Small-pox ..	..	..	..	..	..	..	..	..	..	..	
Chicken-pox ..	..	..	..	..	..	..	..	..	..	..	
Measles ..	..	..	..	..	..	..	..	..	..	..	
Scarlet Fever ..	..	..	..	1	1	2	..	..	1	4	
Whooping Cough ..	..	..	..	..	..	..	..	..	..	..	
Diphtheria and Croup ..	..	..	..	..	..	..	..	..	..	..	
Erysipelas ..	..	..	..	..	..	..	..	1	..	1	
Tuberculous Meningitis ..	..	..	..	..	..	..	..	..	..	..	
Abdominal Tuberculosis (b) ..	..	..	..	..	..	1	..	..	1	1	
Other Tuberculous Diseases ..	..	..	..	..	..	..	..	..	..	..	
Meningitis (<i>not Tuberculous</i>) ..	1	2	..	..	3	..	1	..	1	5	
Convulsions ..	..	..	..	..	..	3	1	..	1	5	
Laryngitis ..	..	..	..	..	..	..	..	..	1	1	
Bronchitis ..	..	..	..	..	..	..	..	..	1	1	
Pneumonia (all forms) ..	..	..	..	..	..	..	1	4	1	5	
Diarrhoea ..	..	..	..	..	..	..	1	..	3	8	
Enteritis ..	..	1	..	..	1	..	1	..	1	3	
Gastritis ..	..	..	..	..	..	1	1	1	1	4	
Syphilis ..	..	1	..	..	1	..	1	..	..	2	
Rickets ..	..	..	..	..	..	..	..	..	..	..	
Suffocation, Overlying ..	..	..	..	..	1	..	..	..	..	1	
Injury at Birth ..	2	..	1	..	2	..	..	..	..	2	
Atelectasis ..	1	..	..	..	1	..	..	..	..	1	
Congenital Malformations (c) ..	..	..	..	..	..	1	1	1	..	3	
Premature Births ..	6	1	1	1	9	1	1	..	..	10	
Atrophy, Debility and Marasmus ..	1	1	2	..	3	4	..	..	..	7	
Other Causes ..	2	1	..	..	3	1	3	2	1	10	
Totals ..	13	6	4	2	25	14	10	9	11	69	

Nett Births in the year, legitimate, 769; illegitimate, 31.

Nett Deaths in the year of legitimate infants, 66; illegitimate infants, 3.

Administration of the Factory and Workshop Acts, 1901 & 1907

IN CONNECTION WITH

Factories, Workshops, Laundries, Workplaces, and Homework.

1. INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF
NUISANCES.

Premises. (1)	Number of		
	Inspections (2)	Written Notices (3)	Prosecutions (4)
Factories (including Factory Laundries) ...	47	0	—
Workshops (including Workshop Laundries) ...	177	28	—
Workplaces (other than Outworkers' premises included in Part 3 of this Report) ...	17	0	—
Total ...	241	28	—

2. DEFECTS FOUND.

Particulars. (1)	No. of Defects.			Number of Prosecu- tions. (5)
	Found (2)	Remed'd (3)	Referred to H.M. Inspect'r (4)	
Nuisances under the Public Health Acts—				
Want of Cleanliness ...	3	3	—	—
Want of Ventilation ...	0	0	—	—
Other Nuisances ...	5	5	—	—
Sanitary accommodation { insufficient ...	1	1	—	—
{ unsuitable or defective ...	1	1	—	—
{ not separate for sexes ...	0	0	—	—
Offences under the Factory & Workshop Act :				
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ...	19	19	—	—
Total ...	29	29	—	—

3. HOME WORK

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.							OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.	
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists.	In- stances.	Notices served.
	Sending twice in the year.			Sending once in the year.					
	Lists.	Outworkers. Con- tractors	Work- men.	Lists.	Outworkers. Con- tractors	Work- men.			
Wearing Apparel :—									
(1) Making, etc. ...	9	—	22	2	—	2	44	—	—
(2) Cleaning & washing	0	—	*2	—	—	—	—	—	—
Furniture & upholstery	1	—	4	—	—	—	—	—	—
Total ...	10	—	28	2	—	2	44	—	—

* These two workmen have been transferred from a list included in (1) Making, etc.

4. REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year.	Number.
Dressmaking and Millinery	25
Bakehouses	40
Drapery and Tailoring	30
Boot and Shoe Making and Repairing	15
Blacksmiths and Shoeing Smiths... ..	12
Cabinet Making and Upholstering	6
Building Contractors	7
Miscellaneous	47
Total Number of Workshops on Register	182

5. OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Acts (S. 133, 1901)	0
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5, 1901)	4
Underground Bakehouses (s. 101) in use at the end of the year	4
	0

